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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,323	10/09/2000	Bin Zhao	97RSS433DIV	6870

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EXAMINER

PERALTA, GINETTE

ART UNIT PAPER NUMBER

2814

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Applicant N .

09/686,323

Applicant(s)

ZHAO, BIN

Examiner

Ginette Peralta

Art Unit

2814

--Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 May 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 93-117.

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
10. ☐ Other: _____

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TECHNOLOGY CENTER 2003

Continuation of 5. does NOT place the application in condition for allowance because: Regarding applicant's argument that Michael et al. does not teach, disclose or even suggest forming first and second air gaps and a support pillar in the first hard mask and the first insulating layer, it is noted that Michael et al. teaches in Figs. 7 through 10 a first and second air gaps 26 formed by two trenches in the insulating layer 20 and a support pillar between the two air gaps 26. It is further noted that Michael et al. does not disclose the hard mask being formed over the dielectric layer and the hard mask including the air gaps, but Chen et al. is relied upon for the teaching of using a low-k dielectric layer, forming a hard mask over a dielectric layer prior to the formation of trenches, and forming trenches in the hard mask and the dielectric layer, wherein the hard mask is used for the disclosed intended purpose of improving the etch rate selectivity of the underlying dielectric, and using a low k dielectric material for the disclosed intended purpose of replacing silicon oxide in order to improve performance, thus Chen et al. modifies Michael et al. by using a low k dielectric material instead of silicon oxide, and by using a hard mask on which gaps are formed for the disclosed intended purpose of providing better etching behavior of the insulating layer.